



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

APR 14 2014

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

James Gray, General Manager
United States Steel Corporation – Great Lakes Works
No. 1 Quality Drive
Ecorse, Michigan 48229

Dear Mr. Gray:

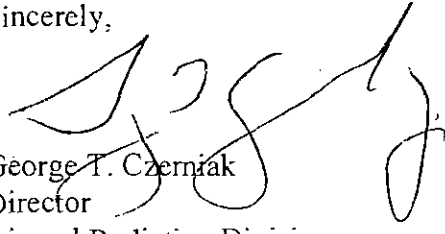
The U. S. Environmental Protection Agency (EPA) is issuing the enclosed Notice of Violation and Finding of Violation (NOV/FOV) to United States Steel Corporation – Great Lakes Works (U.S. Steel). This NOV/FOV is issued in accordance with Section 113(a) of the Clean Air Act (the Act), 42 U.S.C. § 7413(a).

On April 4, 2014, U.S. Steel submitted to the Michigan Department of Environmental Quality, Air Quality Division, a report in accordance with Michigan State Implementation Plan Rule R336.1912 (Rule 912 Report) pertaining to a March 27, 2014 partial collapse of the Electrostatic Precipitator (ESP) dirty gas collection system ductwork at the No.2 Basic Oxygen Process (BOP) Shop. Based on the information U.S. Steel provided in its Rule 912 Report, EPA finds that U.S. Steel: (1) operated its BOP Furnace when its ESP was not installed and operating properly; (2) failed to continuously meet BOP Shop roof monitor opacity standards required by its Title V Renewable Operating Permit (Title V Permit), the Michigan State Implementation Plan (Michigan SIP) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Manufacturing at Subpart FFFFF (Subpart FFFFF); and (3) failed to adequately inspect and maintain critical components of its ESP and operate at all times in accordance with its ESP operation and maintenance plan, required by the NESHAP and its Title V Permit to ensure good pollution control practices at the BOP Shop ESP.

EPA has determined that U.S. Steel has violated the NESHAP, the Michigan SIP, and Title V Permit at its facility in Ecorse, Michigan, and is offering you an opportunity to confer with us about the violations cited in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violations, and the steps you will take to bring the facilities into compliance. Please plan for your technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Gina Harrison. You may call Ms. Harrison at (312) 353-6956 to request a conference. You should make your request for a conference no later than 10 calendar days after you receive this letter, and we should hold any conference within 30 calendar days of your receipt of this letter. EPA hopes this NOV/FOV will encourage U.S. Steel to comply with the requirements of the CAA.

Sincerely,



George T. Czerniak
Director
Air and Radiation Division

Enclosure

cc: David W. Hacker, U.S. Steel Law Department
Katherine Koster, Michigan Department of Environmental Quality

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)	
)	
U.S. Steel Corporation – Great Lakes Works, Ecorse, Michigan.)	NOTICE OF VIOLATION and FINDING OF VIOLATION
)	
)	EPA-05-14-MI-07
Proceedings Pursuant to the Clean Air Act, 42 U.S.C. §§ 7401 <i>et seq.</i>)	

NOTICE OF VIOLATION AND FINDING OF VIOLATION

U.S. Steel Corporation – Great Lakes Works (U.S. Steel) owns and operates an integrated iron and steel facility located at No. 1 Quality Drive, Ecorse, Michigan (Facility). At its Facility U.S. Steel owns and operates basic oxygen process (BOP) furnaces, an Electrostatic Precipitator (ESP), and other operations.

EPA is sending this Notice of Violation and Finding of Violation (NOV/FOV) to notify you that we have found that U.S. Steel has violated the following provisions of the Clean Air Act (the Act or CAA): the Michigan State Implementation Plan (SIP); the Michigan Title V Permit Program; and the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Statutory and Regulatory Authority

Michigan SIP Requirements

1. The CAA requires the promulgation of Primary and Secondary National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. To attain and maintain these standards, each state is required to develop a state implementation plan. The Michigan SIP includes the following requirements:
 - a) Pursuant to the Michigan SIP rule R336.1364(2), visible emissions from the BOP roof monitor are limited to 20% opacity on a three-minute average.

Federal CAA Requirements

2. On March 16, 1994, EPA promulgated the NESHAP at 40 C.F.R. Part 63, *et seq.* The provisions at §63.6(e) regulate compliance with standards and maintenance requirements and require the owner or operator of an affected source to operate all associated air pollution control equipment and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions.
3. Section 112(b) of the CAA established a list of hazardous air pollutants (HAPs) and provided that EPA shall add to the list additional pollutants that may present a threat of adverse human health effects through inhalation or other routes of exposure. Section 112(d) provides that EPA shall promulgate regulations establishing emission standards for each category or subcategory of major sources and area sources of listed HAPs.
4. On May 20, 2003, EPA promulgated the NESHAP for Integrated Iron and Steel Manufacturing, 40 C.F.R. Part 63, Subpart FFFFF, §63.7780 *et seq.* The purpose of these standards is to reduce, on a national scale, emission of chemicals that possess carcinogenic or toxic characteristics. These regulations include the following requirements:
 - a) Pursuant to 40 C.F.R. §63.7790(a) and Table 1.12, visible emissions at BOP roof monitors are limited to 20% opacity on a three-minute average.
 - b) Pursuant to 40 C.F.R. §63.7790(b)(3), for each ESP applied to emissions from a BOP furnace, a source must maintain the hourly average opacity of emissions exiting the ESP at or below 10 percent.
 - c) Pursuant to 40 C.F.R. §63.7800(a) and as required by §63.6(e)(1)(i), a source must always operate and maintain air pollution control and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this Subpart.
 - d) Pursuant to 40 C.F.R. §63.7800(b)(1-2), a source must prepare and operate at all times according to a written operation and maintenance plan (O&M Plan) for each capture system or control device subject to an operating limit in §63.7790(b). Each O&M Plan must address the elements in paragraphs (b)(1) through (7) of this section, including monthly inspections of the equipment that is important to the performance of the total capture system (e.g., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The O&M Plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection. Each O&M Plan should also include preventative maintenance for each control device,

including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

Michigan Title V Requirements

5. The CAA requires states to develop a major source permit program, known as the Title V permit program. EPA approved Michigan's permit program on December 4, 2001, at 66 Fed. Reg. 62949. Violations of a Title V permit are federally enforceable. U.S. Steel's Title V permit 199600132d was issued March 1, 2005, and includes the following requirements:
 - a) Pursuant to Condition E-01.18.11.2, visible emissions from BOP Shop roof monitors are limited to 20% opacity on a three-minute average.
 - b) Pursuant to Condition F-01.07.VI.4, U.S. Steel shall at all times comply with the operation and maintenance requirements as specified in 40 C.F.R. §63.7800 (a) and (b).
 - c) Pursuant to Condition E-01.18.VI.1, U.S. Steel shall not operate the two main BOP furnaces (BOP furnace No. 25 and BOP furnace No. 26) unless the ESP is installed and operating properly.
6. The Title V regulations at 40 C.F.R. §70.7(b) state that no source subject to Title V may operate the source except in compliance with a Title V permit. Pursuant to 40 C.F.R. §71.5, the owner or operator of a source subject to Title V must submit a permit application which includes all applicable CAA requirements.
7. Section 502(d)(1) of the Act, 42 U.S.C. §7661a(d)(1), requires each state to develop and submit to EPA an operating permit program which meets the requirements of Title V. Pursuant to Appendix A of 40 C.F.R. Part 70, on December 4, 2001, EPA granted Michigan final full approval of its Title V Clean Air Act Permit Program. 66 Fed. Reg. 62949 and 68 Fed. Reg. 63735.
8. The Title V regulations at 40 C.F.R. §70.3 provide that the requirements of Part 70 apply to any major source located in a state that has received whole or partial approval of its Title V program.

Explanation of Violations

9. On April 4, 2014, U.S. Steel submitted to the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), a report under the Michigan State Implementation Plan Rule R336.1912 (Rule 912 Report) pertaining to a March 27, 2014 partial collapse of the Electrostatic Precipitator (ESP) dirty gas collection system ductwork at the No.2 Basic Oxygen Process (BOP) Shop.

10. In its Rule 912 Report to AQD, U.S. Steel explains the Number 2 BOP Shop incurred a structural failure of the #26 (Furnace) Vessel gas collection system at approximately 4:55 p.m. on March 27, 2014. U.S. Steel further explained that the section of the system that failed included #26 Vessel downcomer and the west end of the dirty gas main, and that as a result of the event U.S. Steel experienced emissions in excess of both the 20% opacity standard and particulate matter limits.
11. In its Rule 912 Report, U.S. explains that at approximately 6:30 p.m., the heat on #26 Vessel was [oxygen] blown for six minutes to remove [the heat] from the vessel. Since the failure of the #26 Vessel gas collection system rendered the ESP incapacitated, this oxygen blow was conducted without concurrently operating the associated ESP.
12. On April 10, 2014, EPA and AQD participated in a discussion by phone with Ms. Alexis Piscitelli, Director of Environmental Control for the U.S. Steel, Great Lakes Works Facility. During this discussion Ms. Piscitelli told EPA and AQD that opacity at the BOP Shop roof monitor was greater than 20% on a three-minute average intermittently for the period 4:55 p.m. to 7:15 p.m.
13. U.S. Steel's operation of its BOP Furnace when its ESP was not installed and operating properly and concurrently is a violation of U.S. Steel's Title V Permit Condition E-01.18.VI.1 and the NESHAP at 40 C.F.R. §63.7800(a).
14. U.S. Steel's failure to continuously limit opacity at the BOP Shop roof monitor to 20% on a three-minute average is a violation of Michigan SIP provision R336.1364(2), U.S. Steel's Title V Permit Condition E-01.18.II.2, and the NESHAP at 40 C.F.R. §63.7790(a) and Table 1.12, and §63.7800(a).
15. U.S. Steel's failure to adequately inspect and maintain critical components of its ESP and operate at all times in accordance with its ESP O&M Plan is a violation of the NESHAP at 40 C.F.R. §63.7800(b)(1-2) and §63.7800(a), U.S. Steel's Title V Permit Condition F-01.07.VI.4.

Environmental Impact of Violations

16. These violations have caused or can cause excess emissions of opacity, particulate matter, carbon monoxide (CO) and hazardous air pollutants.
17. Excess opacity increases public exposure to unhealthy particulate matter. Excess emissions of particulate matter increase public exposure to fine particulates. Fine particulate matter contributes to respiratory problems, lung damage and premature deaths.
18. Excess emissions of CO increase public exposure to CO, which can enter the bloodstream and reduce oxygen delivery to the body. CO can also aggravate cardiovascular disease.

19. Particulate matter from iron and steel manufacturing contains lead, manganese and other compounds that are considered to be Air Toxics and are especially harmful to human health and the environment. Chronic (long-term) exposure to high levels of manganese by inhalation in humans may result in central nervous system and respiratory effects. Manganese can affect visual reaction time, hand steadiness, and eye-hand coordination. Lead affects the nervous system. Children are particularly sensitive to the neurotoxic effects of lead and there is evidence that lead may affect the hearing threshold and growth in children. Other effects from chronic lead exposure in humans include effects on blood pressure and kidney function, and interference with vitamin D metabolism.

Dated: _____

4/14/14


George T. Czerniak

Director

Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Notice of Violation and Finding of Violation, No. **EPA-05-14-MI-07** by Certified Mail, Return Receipt Requested, to:

James Gray
General Manager
United States Steel Corporation, Great Lakes Works
1 Quality Drive
Ecorse, Michigan 48229


David W. Hacker
Law Department
United States Steel Corporation
600 Grant Street
Pittsburgh, Pennsylvania 15219-2800

~ 7009 1680 0000 7676 2670

I also certify that I sent copies of the Notice of Violation and Finding of Violation by first class mail to:

Katherine Koster
Michigan Department of Environmental Quality
3058 West Grand Boulevard, Suite 2-300
Detroit, Michigan 48202-6058

On the 14 day of April, 2014


Loretta Shaffer, Administrative
Program Assistant

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7676 2663